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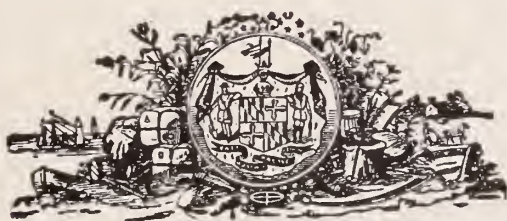
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# The Thirty-Seventh Annual Report

OF THE

## UNIVERSITY OF MARYLAND

Agricultural Experiment Station



College Park, Prince George County, Maryland

1923-1924

PUBLISHED BY THE STATION



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# UNIVERSITY OF MARYLAND

## AGRICULTURAL EXPERIMENT STATION

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Volume 37

1923-1924

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### THE THIRTY-SEVENTH ANNUAL REPORT OF THE MARYLAND AGRICULTURAL EXPERIMENT STATION

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For the Fiscal Year Ending June 30, 1924

By H. J. PATTERSON, Director.

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*To the Governor of Maryland and the President and the Board of  
Trustees of the University of Maryland:*

Gentlemen—In accordance with the requirements of the act of Congress passed in 1887 providing for the establishment and support of agricultural experiment stations, I submit herewith a report upon the investigational work which is being pursued and a financial statement as to the expenditure of Federal and State appropriations for the fiscal year ending June 30, 1924.

RESULTS OBTAINED IN 1923-24.

#### HOW THEIR USE WILL BENEFIT THE FARMER.

The results of the investigations secured during the year and which seem of sufficient importance to give to the public have been distributed through the bulletins published by the Station, papers presented at scientific meetings and published in scientific journals and popular addresses given at farmers' meetings and articles in agricultural journals and newspapers. The following is a list of the bulletins published during the year:

Bulletin No. 256—Fruit-Rotting Sclerotinias. By Norton, Ezekiel and Jehle.....	Page 3- 32
Bulletin No. 257—Is There Normally a Cross Transfer of Foods, Water and Mineral Nutrients in Woody Plants? By E. C. Anchter.....	33- 60
Bulletin No. 258—Changes in Quality and Chemical Composition of Parsnips Under Various Storage Conditions. By V. R. Boswell .....	61- 86
Bulletin No. 259—Some Studies in the Production of Double Blooms of Stocks ( <i>Mathiola Incana</i> Anna). By Thomas H. White .....	87-102
Bulletin No. 260—The Effect of Heat Upon the Availability of the Phosphorus in Basic Phosphate Rock. By McCall and Wilhelm .....	103-120
Bulletin No. 261—The Control of Truck Crop Pests by Dusting. By Cory and Potts .....	121-156
Bulletin No. 262—Spraying for Control of Diseases and Insects of the Apple. By Jehle and Cory .....	157-168
Bulletin No. 263—Dusting and Spraying Cantaloupes. By Jehle and Potts .....	169-180
Bulletin No. 264—Control of the European Red Mite. By C. C. Hamilton .....	181-238
Bulletin No. 265—Potato Sprouts as an Index of Seed Value. By C. O. Appleman .....	239-258
Bulletin No. 266—What Is the Value of a Ton of Stable Manure? By McCall and White .....	259-286
Bulletin No. 267—Some Chemical Aspects of Sweet Corn Drying. By C. O. Appleman .....	287-298
Thirty-sixth Annual Report, 1922-23. By H. J. Patterson .....	22

The following is a partial list of scientific papers contributed to journals and meetings:

1. The Development of a Blight Resistant  
Spinach ..... F. W. Geise
2. More Vegetables from the Home Garden ..... F. W. Geise and  
V. R. Boswell
3. Irish Potatoes ..... T. H. White
4. Growth Studies of the Concord Grape ..... A. L. Schrader
5. The Influence of Grape Pruning on Yields ..... A. L. Schrader
6. Investigations on the Rooting of Apple Cut-  
tings ..... A. F. Vierheller
7. Changes in Quality and Chemical Composition  
of Parsnips Under Various Storage Condi-  
tions ..... V. R. Boswell
8. Influence of time of maturity of Onions on the  
behavior during storage and the effect of  
Storage temperature on subsequent vegeta-  
tion and reproductive development ..... V. R. Boswell

9. Influence of the time of maturity of Onions upon the rest period, dormancy and response to various stimuli designed to break the rest period ..... V. R. Boswell
10. The Importance of proper pollination in fruit yield ..... E. C. Auchter
11. Apple and Peach orchard fertilization ..... E. C. Auchter
12. Factors influencing the fertilization, pruning and soil management of apple orchards ..... E. C. Auchter
13. Market Preferences for Apple Varieties ..... E. C. Auchter
14. The Influence of Nitrogen and Special Pruning in bearing sod and cultivated Apple Orchards ..... Auchter and Schrader
15. Fruit Spur Growth and Fruit Bud Production.....Auchter and Schrader
16. Grape Breeding in Maryland ..... Auchter and Whitehouse
17. The Rejuvenation of Peach Orchards..... E. C. Auchter
18. The Fertilization of Apple and Peach Orchards ..... E. C. Auchter
19. A Colorimetric Picric Acid Method for Determining Lactose ..... H. R. Bierman and F. J. Doan
20. The Color of Cow's Milk and Its Value ..... F. J. Doan
21. The Determination of Protopectins in Irish Potatoes ..... C. M. Conrad

## OUTSTANDING RESULTS

All of the bulletins and papers referred to above have recorded some important results and their application and use by farmers will prove profitable and worth while.

However some of the conclusions and results would seem to be of special and far-reaching value and warrant calling attention to in this connection.

**ORCHARD FRUITS:** In orchard fertilization nitrogen proved of special value to peaches on all soils, and to apples on sandy soils and on all soils when the orchard is in sod. Nitrogen was not of much value to apples in cultivated orchards, with cover crops, on heavy soils.

**GRAPE PRUNING** test have shown the two wire Kniffin to be the best. Yields were obtained one year sooner than with the other systems tested. Studies of the relation of pruning to root development show that contrary to the usual idea, heavy pruning does not promote root development, but that the best root development was found with the lighter pruned vines. Fruit buds on the middle of the cane gave higher yields than the buds on the lower and outer ends.

**POTATOES:** The results obtained in the study of the relation of potato sprouts to seed value would seem to mark a distinct advance in the methods which should be used for selecting and certification of seed potatoes. The potato grower who desires to procure high yields and furnish high-classed seed should test the potatoes, so as to determine the character and vigor of the sprouts. A strong, vigorous sprout will not be a guarantee that the tuber is free from all diseases, but it will indicate its ability to resist disease and produce a crop. A weak sprouting sprout indicates that the tuber should be discarded and never used for seed.

In tests to determine a variety of late potatoes to substitute for the McCormick potato, which is no longer reliable on account of the Mosaic disease, comparisons were made of Dakota Red, Michigan Rural Russett, Scotch Rural and Rural New Yorker. Their yielding capacity stood in the order named. The Dakota Red can be recommended to yield well under the same conditions and treatment as given the McCormick variety. The tests of varieties of late potatoes would seem to indicate and establish the rule for the date of planting to be the number of weeks before probable frost which it requires for the given variety to mature; that is a variety which requires only twelve weeks to mature should be planted about two weeks later than a variety which requires fourteen weeks to mature.

**Asparagus:** A comparison of yields of different varieties were as follows: First, Palmetto; second, Bonvalut Giant; third, Washington.

**Rhubarb:** Fertilizer tests with different forms of nitrogen on rhubarb resulted in sulphate of ammonia plants yielding 33 per cent more than was obtained with either nitrate of soda, dried blood or bone meal.

**Sweet Potatoes:** Tests show that acid soils should be "limed" for sweet potatoes. On acid soils lime produced a greater increase in yield than any fertilizer, but applications of both lime and fertilizers is recommended and will prove profitable.

**WHEAT:** The study of the environmental factors which influence wheat yields have made it possible to classify certain group type or variety families as specially adapted to definite regions and kinds of soils. The Piedmont Plateau is a region where smooth wheats do best and can be recommended, while the Coastal Plain to the East and the limestone valleys to the West find the bearded or Falcaster wheats preferable. The indications are that this difference in behavior is largely due to their relative susceptibility to disease.

Wheat following soybeans for hay yield about two bushels more per acre than wheat following corn.

If 100 is taken as the index yield of all the varieties of wheat grown in 1890, the best five grown in 1890 would have an index or relative producing capacity of 114; and the best five now would have an index of 126 and the newest selection (Mammoth Red) has an index of 139. If the entire crop of wheat in Maryland was planted with the present five leading varieties it would probably result in raising the total annual yield 100,000 bushels. Surveys indicate that 70 per cent of the farmers of this State use varieties advocated by the Station.

**CORN:** The variety tests of corn the past year confirmed and emphasized the results previously obtained that the Southern prolific varieties give five to eight tons more silage per acre than the varieties recommended for mature grain in this section.

The difference in grain yield is usually only about five bushels per acre. Thus the quality of the silage is not affected materially.

**SOYBEANS:** The Virginia and Wilson varieties are recommended for Maryland. When they are grown for hay they should be seeded at the rate of seven pecks per acre. The first soybeans grown in Maryland were seeded on the Station farm in 1888. There are now over 40,000 acres grown each year. The value of the crop from an acre of soybeans is about three times that received from an acre of wheat.

Soybeans should not be grown continuously on the same land for more than two years, as diseases will develop which will reduce the yields.

Soybeans for hay should be seeded between May 20 and June 10. To obtain the best yields and quality of feed they should be harvested in from 90 to 105 days after the plants first appear above ground.

A test of the use of soybean hay for balancing a dairy ration and as a substitute for wheat bran showed that the wheat bran produced more milk and butter, but that the cost of the product was less or more economical with the soybean ration.

**HAY:** Maryland devotes annually over 600,000 acres of arable land to hay crops. The average yield is only slightly over one ton per acre. The tests covering several years have shown that on timothy and mixed hays the yields may be increased one-half ton per acre by applying in the early spring 200 to 300 pounds per acre of nitrate of soda. Experiments and farm practice have proven that fall seeded hay mixtures without nurse crops produce a higher quality and from one to two tons more hay per acre than the same

mixtures do when seeded with a nurse crop in the usual manner of the timothy in the fall and the clover in the spring. In seeding hay crops the Station's results show that it is a good practice to prepare wheat stubble by discing several times; then broadcast the seed of the hay mixture and press it into the surface of the soil with a corrugated roller.

In most parts of Maryland the seed should be sown during the last half of August. Preferably immediately after a good rain. The following mixture has proven satisfactory at the Experiment Station:

Timothy .....	6 parts
Alsike clover.....	5 to 6 parts
Alfalfa .....	4 to 6 parts

Seed at the rate of 15 to 20 pounds per acre. In Eastern Maryland three crops of hay may be cut the following season. The first crop is mixed hay, the second crop is mixed clover and alfalfa, and the third crop is nearly all alfalfa.

As high as six tons per acre has been gotten in one season from this plan of seeding.

**INSECT AND PLANT DISEASE CONTROL:** The results obtained in the control of the Brown-Rot Fungus (Bulletin 256), the control of Track Crop Pests by Dusting (Bulletin 251), Dusting and Spraying Cantaloupes (Bulletin 263) and the Control of the European Red Mite (Bulletin 264); all mark a distinct advance and places at the disposal of farmers more certain methods for the protection of crops against insect and disease foes.

**STABLE MANURE:** The summary of the results of tests of stable manure (Bulletin 266) with different crop on soils under varying conditions have emphasized its value as far beyond the worth of the phosphoric acid, potash and nitrogen which it contains. These results should impress upon farmers in many parts of this State with the desirability of expanding livestock husbandry for the value of the manure they make and the help which it gives in increasing the returns from the principal crops. These results should also impress all with the necessity for more care in handling manure so as to prevent loss.



## EXPERIMENT STATION PROJECTS, 1924-25.

### Animal Husbandry Investigations: (\*)

Leader—DeVoe Meade.

1. Survey of the Sheep Industry and Correlation of factors influencing the raising of sheep.
2. Hogging off vs. Pen feeding of corn.
3. Supplementary protein feeds for hogs when hogging off corn.
4. Pasture vs. no pasture for hogs.

### Dairy Husbandry: (\*)

Leaders—J. A. Gamble, H. Bierman, F. J. Doan, S. H. Harvey.

1. Tests of 32% mixed ration for balancing home feeds vs. 24% mixed rations.
2. A compilation of the results obtained through the pure bred bull associations.
3. A study of factors influencing colors and flavors in milk.
4. A study of factors influencing seasonal variations in the quality of milk.
5. Growth studies of dairy animals.
6. A study of the relation of water supply to milk flow.
7. A comparison of the Baltimore and composite method of making milk tests.
8. Powdered milk as a feed for calves.

### Poultry Husbandry:

Leader—R. H. Waite.

1. Poultry feeding—continuation of 1922-23. (\*)
2. Appliances and Methods—continuation of 1922-23. (II)
3. A study of methods of pullet selections for egg production. (II)
4. Systems of culling flocks. (II)

### Biological Laboratory and Hog Cholera Investigations: (\*)

Leaders—E. M. Pickens, H. B. McDonnell, F. J. Poelma, W. R. Crawford.

1. Determining the percentage of double treated hogs that may later become susceptible to cholera; to find the proper age that pigs may be immunized by the double treatment; and length of time immunity of double treated pigs may be expected to last.
2. Determining the age at which pigs from immune mothers become susceptible to hog cholera.
3. A study of the relation of Ozone to animal diseases.

### Farm Crops:

Leaders—J. E. Metzger, W. B. Kemp, J. W. Mumford, R. F. Hale.

1. Studies of pastures and pasture grasses for different sections of the State. (\*)
2. Correlation of meteorological factors with wheat yields. (II)
3. Sugar corn seed production and breeding. (\*)

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(\*) State Funds. (II) Hatch Funds. (A) Adams Funds.

4. Experiments in forage, green manure, and winter cover crops. To determine the best use of rye, winter vetch, sweet clover, the common clovers, and alfalfa for forage, green manure, and winter cover crop purposes.
5. Methods of harvesting test plats. (II)  
To study the accuracy of records secured by harvesting a portion of a plat in comparison with the yields secured from the entire plat.
6. Variety tests and selections of hardy strains of winter oats. (II)
7. Wheat variety tests and improvements by selection and breeding. (II)
8. Tests of varieties of cowpeas for seed and hay. (\*)
9. Corn production, selection, breeding and variety adaptation. (\*)
10. Soybean investigation. Adaptation of imported varieties. (\*) selection of superior types, tests of yields for hay and seed of varieties.
11. Place soybeans could occupy in the farm rotation. (\*)
12. Studies in crop rotations. (\*)  
To determine the most profitable point in the rotation to apply the usual fertility measures practiced by Maryland farmers.
13. Studies on environment in wheat. (II)

### Insect Investigations:

Leaders—E. N. Cory, C. C. Hamilton, R. C. Burdette.

1. The woolly aphis.  
To ascertain a method of control, especially applicable to trees in the nursery.
2. Dusting peach and apple trees for the control of insects and diseases. (\*)
3. Bionomics and control of the apple leaf-skeletonizer and the bearing of the data obtained on other related species. (A)
4. The study of the biology and control of the rose midge.
5. The boxwood leaf miner. (A)
6. Tests of methods of control of the European Red Mite. (A-II)
7. Dusting strawberry fields to control the strawberry weevil. (\*)
8. Control of the strawberry aphids. (\*)
9. The toxic reactions of the peach tree borers as affecting control. To ascertain the color reactions of adult peach tree borers. (\*)
10. The life history and control of the red spider. (\*)  
To study the life history under greenhouse conditions and to develop satisfactory methods of control.
11. The life history and control of the greenhouse mealy bug.
12. Comparative insecticide tests. (\*)  
To study the lethal effect of new insecticides on plant tissues.
13. Insecticide investigation.  
The chemical, physical, and insecticidal properties of commercial pine oils and creosotes. (A)
14. A study of the Efficiency of Spreaders and Stickers. (A)
15. Biology of *Pollenia rudis*.

### Botany and Plant Pathology Investigations:

Leaders—J. B. S. Norton, R. A. Jehle, W. N. Ezekiel.

1. Identification of weeds, poisonous plants, ornamentals, trees, wild plants, mushrooms and diagnoses of plant diseases. (\*)
2. Maryland trees. (\*)  
Preparation of a manual of the trees, wild and cultivated, grown in Maryland.



3. Maryland grasses. (\*)  
Preparation of a manual of the wild and cultivated grasses of Maryland, by which they can be identified and their economic value determined.
4. Corn root rot and root rot of peas. (\*)  
To determine the causes and to select strains resistant to the disease.
5. Diseases of seeds. (II)  
To find diseases that are carried in the seed and means of disinfecting seed carrying parasitic diseases, and to study the trouble due to immaturity.
6. Fusarium wilt resistant tomatoes. (II)  
To secure strains of canning tomatoes that will yield well on land infected with the wilt fungus prevalent in Maryland.
7. Control of leaf blight of tomato. (A)  
To devise practical methods for controlling Septoria leaf blight of the tomato under field conditions.
8. Relation of Sulphur and Sulphur compounds to cell structure. (A)
9. Sclerotinia fruit rot. (A)
10. Life history and classification of fungus *Mycosphaerella*. (A)

#### **Plant Physiology Investigations: (A)**

Leaders—C. O. Appleman, E. S. Johnston, C. M. Conrad,  
W. D. Kimbrough.

1. The physiological and biochemical aspects of potato storage and transportation.
2. Some physiological aspects of fruit storage.
3. Metabolism studies with sweet corn.
4. Factors Influencing the Hardness of the Peach.
5. Mineral nutrient requirements of the potato plant.
6. The Relation of Light, Temperature and Atmospheric Moisture to the Physiological Salt Balance in Nutrient Solutions for Plants.

#### **Horticultural Activities.**

##### **Pomology: (\*II)**

Leaders—E. C. Auchter, A. L. Schrader.

1. Fruit spur and biennial bearing studies of apples—Hancock, Maryland.
2. The effect of shade on horticultural plants. Fruits, vegetables and flowers used—College Park.
3. The effect of varying the length of day on plant growth and chemical composition—College Park.
4. The fertilization of apple orchards—Salisbury, Hancock, Colesville, Berlin and Mt. Airy.
5. The fertilization of peach orchards—Salisbury, Berlin, Mt. Airy and College Park.
6. Sod versus tillage for apple orchards—Hancock and Colesville.
7. The propagation of apple trees on their own roots—College Park.
8. The fertilization of strawberries—College Park, Ridgely, Salisbury and Marion.
9. The composition of bearing and non-bearing fruit spurs throughout the year—College Park.
10. The effect of bud and spur defoliation on fruit bud formation (peach)—College Park.
11. The influence of pollination on fruit yields—Hancock, College Park and Salisbury.

12. Experiments in grape training and pruning—College Park, Beltsville and Salisbury.
13. The rejuvenation of peach orchards—College Park and Smithsburg.
14. Peach pruning experiments—College Park, Salisbury and Mt. Airy.
15. The breeding of blight resistance pears—College Park.
16. The breeding of early colored grapes—College Park.
17. Variety tests of apples, peaches, pears, plum and cherries—College Park.
18. Variety tests of grapes and strawberries—College Park and Ridgely.
19. Variety tests of bush fruits—College Park.

## **Vegetable Gardening: (II\*)**

### **1. Potatoes:**

Leader—Thomas H. White.

- A. Improvement of McCormick.
- B. Variety experiments with especial relation to a good late variety.
- C. Time of planting late potatoes—Belair, Marion and College Park.

### **2. Cabbage and Cauliflower:**

Leaders—Thomas H. White and V. R. Boswell.

- A. Methods of growing seeds of especially adapted varieties.
- B. Conditions affecting heading of late crop of cauliflower in southern sections of State—Ridgely and College Park.
- C. Study of hardiness in Early Jersey Wakefield and Charleston Wakefield, and possible bearing it may have on formation of seed shoots—College Park.
- D. Selection of mid-season "yellows" resistant strains best suited to Maryland—College Park.

### **3. Garden Peas:**

Leaders—F. W. Geise and V. R. Boswell.

- A. Fertilizers.
- B. Rate of seeding.
- C. Best crop to precede.
- D. Rotation of crops with and without legumes as affecting diseases.
- E. Inoculation Experiments.
- F. Influence of temperature on the growth of peas—Ridgely and College Park.

### **4. Rhubarb:**

Leader—Thomas H. White.

- A. Chemical fertilizers with especial reference to Sulphate of Ammonia—College Park and Chillum.

### **5. Cantaloupes:**

Leader—Thomas H. White.

- A. Breeding and selection.
- B. Manures vs. fertilizers.
- C. Pollination influence.

**6. Sweet Potatoes:**

Leader—F. W. Geise.

- A. Fertilizers—best nitrogen and potash carriers.
- B. Lime influence—Salisbury and Cheltenham.

**7. General Fertility Problems:**

Leader—Thomas H. White.

- A. Amounts of manures and fertilizers to keep soil fertile for vegetable production.
- B. Effect of continued applications of potash salts.
- C. Effect of rye as a winter cover for early spring plowing and same for later work.

**8. Testing new varieties and strains of vegetables.****9. A study of Maryland vegetables as to varieties, cultural methods and marketing.****Floriculture: (11\*)**

Leader—Thomas H. White.

**1. Roses:**

- A. Effect of heavy and light pruning on growth and yield.

**2. Carnations:**

- A. A study of calyx splitting.
- B. Effect of soil types on yields of varieties.

**3. Snapdragons:**

- A. Breeding and selection.

**4. Gladiolus:**

- A. Effect of time of ripening of bulb on forcing qualities.

**5. Treatment of greenhouse soil in solid beds:**

- A. Drainage.
- B. Freezing.
- C. Drying.

**6. Relation of length of day to blooming of violets.****Tobacco Investigations: (\*)**

Leaders—W. W. Garner, D. E. Brown.

Maryland export tobacco investigations.

Improvement by breeding and selection, tests of fertilizers, studies of systems of crop rotation, methods of growing, curing and handling, and control of important diseases.

Plant nutrition investigations.

Crop rotations, comparative effect of tobacco and other crops on yields of succeeding crops.

Tobacco seed production.

**Seed Laboratory: (\*)**

Leaders—F. S. Holmes, A. M. Hook, I. Veitch, O. M. Kelk,  
R. M. Mostyn.

Analyses and germination tests of collected (official) samples.

Analyses and germination tests of collected (unofficial) samples.

Studies of seed control methods and the relation of foreign matter to source.

**Soil and Fertility Investigations: (\*HA)**

Leaders—A. G. McCall, A. M. Smith, J. M. Snyder, H. B. Winant.

An investigation of the factors affecting the availability of the potassium compounds of the soil.

A study of the hourly and daily fluctuations in the temperature of the soil. Records at different depths under bare and cropped surfaces.

Soil management and fertilizer investigations. The upbuilding of fertility of the more important soil types.

Pot culture studies of the fertilizer requirements of different soil types.

Lime requirements of an acid soil.

Comparison of the value of different forms of lime.

Calcium vs. magnesium limestone.

Phosphate experiments.

Comparison of the availability of the phosphorus in raw ground phosphate rock with acid phosphate, when used with green manures.

Green manuring experiments.

Including cowpeas, soybeans and buckwheat.

Including crimson clover, hairy vetch, rye, red clover and alsike clover.

**Soil Survey of the State in Co-operation with State Geological Survey and United States Department of Agriculture.**

## FINANCIAL STATEMENT.

MARYLAND AGRICULTURAL EXPERIMENT STATION IN ACCOUNT  
WITH UNITED STATES APPROPRIATIONS.

Dr.	Hatch Fund	Adams Fund
To appropriations for fiscal year 1923-1924	\$15,000.00	\$15,000.00
Cr.		
By Salaries	\$14,864.71	\$13,876.49
Labor	45.29	140.00
Scientific Supplies		449.80
Communication Service		8.79
Heat, Light, Water and Power		38.02
Furniture and Fixtures		28.09
Library		9.70
Scientific Equipment	90.00	423.61
Tools, Machinery and Appliances		8.00
Building Repairs		17.50
	<u>\$15,000.00</u>	<u>\$15,000.00</u>

MARYLAND AGRICULTURAL EXPERIMENT STATION IN ACCOUNT  
WITH THE STATE APPROPRIATIONS.

Dr.	General Fund	Ridgely Farm
Receipts for year 1923-1924	\$68,005.84	\$5,706.23
Cr.		
By Salaries	\$27,054.88	\$2,012.49
Labor	14,163.57	1,903.18
Stationery and Office Supplies	242.79	
Scientific Supplies	1,099.81	174.64
Feeding Stuffs	5,640.73	
Sundry Supplies	1,398.57	165.95
Fertilizers	1,006.23	360.50
Communication	289.89	42.62
Travel Expenses	2,140.50	26.35
Transportation of things	1,277.68	19.04
Publications	1,400.08	
Heat, Light, Water and Power	2,234.74	19.40
Furniture and Fixtures	1,602.00	
Library	296.48	
Scientific Equipment	1,742.04	155.93
Live Stock	575.00	
Tools, Machinery and Appliances	1,641.90	41.94
Buildings and Land	1,156.18	293.39
Contingent Expenses	3,043.79	55.60
Overdraft June 30, 1923	3,777.22	423.32
	<u>\$71,784.08</u>	<u>\$5,684.35</u>
Overdraft June 30, 1924	3,778.24*	
Balance June 30, 1924		11.88
	<u>\$68,005.84</u>	<u>\$5,706.23</u>

\*Due from State Treasurer.

MARYLAND AGRICULTURAL EXPERIMENT STATION.  
STATION FARM ACCOUNT.

Dr.	
Receipts from sales for year 1923-1924 .....	\$16,837.37
Cr.	
By Labor .....	\$7,251.79
Scientific Apparatus .....	20.89
Feeding Stuffs .....	2,506.23
Sundry Supplies .....	216.33
Communication .....	38.98
Travel Expense .....	12.06
Heat, Light, Water and Power .....	61.41
Furniture and Fixtures .....	630.00
Library .....	1.00
Live Stock .....	550.00
Tools, Machinery and Appliances .....	2.02
Contingent Expenses .....	96.50
Overdraft June 30, 1923 .....	4,989.65
	<hr/>
	\$16,376.86
Balance June 30, 1924 .....	460.51
	<hr/>
	\$16,837.37

MARYLAND AGRICULTURAL EXPERIMENT STATION IN ACCOUNT  
WITH REGULATORY AND PUBLIC SERVICE FUNDS.

Dr.	Biological Laboratory	Seed Inspection
To Balance July 1, 1923	\$7,018.48	.....
Receipts from State	5,439.86	\$7,854.29
Receipts from Sales of Serum	6,409.25	.....
Transfer from Live Stock Sanitary	5,000.00	.....
Total Receipts for Year	\$23,867.59	\$7,854.29
Cr.		
By Salaries	\$5,280.49	\$6,525.00
Labor	2,919.91	414.79
Stationery and Office Supplies	49.10	60.75
Scientific Supplies	2,766.19	16.20
Feeding Stuffs	188.58	.....
Sundry Supplies	602.52	.....
Communication	535.28	23.32
Traveling Expenses	287.56	577.58
Transportation of things		.48
Publications		15.00
Heat, Light, Water and Power	557.13	.....
Furniture and Fixtures	70.00	1.66
Scientific Equipment	291.63	167.30
Live Stock	307.00	.....
Tools, Machinery and Appliances	2,488.44	.....
Buildings and Land	4,380.98	.....
Contingent Expenses	859.50	5.00
Overdraft June 30, 1923		605.33
Total Expenditures for Year	\$21,584.31	\$8,412.41
Balance June 30, 1924	2,283.28	.....
Overdraft June 30, 1924		558.12*
	\$23,867.59	\$7,854.29

\*Due from State Treasurer.

Date

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